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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/014,180
Filing Date: November 13, 2001
Appellant(s): GUTTA ET AL.

Dicran Halajian
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 14 February 2005 appealing from the
Office action mailed 13 September 2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

2004.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial

proceedings which will directly affect or be directly affected by or have a bearing on the

Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection

contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is

correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,334,127   Bieganski et al.   12-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by

Bieganski et al. (U.S. Patent 6,334,127 B1).

Regarding claims 1, 10, 19-23, **Bieganski** teaches a method, system, article of

manufacture for assigning an item to one or more groups of items (col. 8, lines 24-53),

each of said items characterized by at least one symbolic feature, said method

comprising the steps of:

a).   computing a distance between corresponding symbolic feature values of

said item and at least one item in each of said groups, said distance based on an overall

similarity of classification (i.e., forming a neighborhood... who have the profiles most

similar to the customer's profile) of all instances for each possible value of said symbolic

feature values (i.e., distance = serendipity control value) (col. 7, lines 8-19, 46-48; col. 9,

lines 22-33; col. 13, lines 6-17; lines 32-45);

b).   aggregating the distances between each of said features values to

determine the closeness of said item and at least one item in each of said groups

(col. 14, lines 32-56); and

c).   assigning said item to said group associated with a minimum distance

value (col. 7, lines 9-39).

Regarding claims 2-6 and 11-15, **Bieganski** further teaches wherein said

computing step employs a Value Difference Metric (VDM) technique to compute said

distance between symbolic features (col. 6, lines 54-66).

Regarding claims 7-9 and 16-18, **Bieganski** further teaches wherein said items

are programs (col. 16, line 29 – col. 18, line 52).

(10) Response to Argument

__Arguments(1):__   Regarding claims 1, 10, and 19-23

Appellants argue that there is no teaching or suggestion in Bieganski that the

serendipity control value is equal to the distance between corresponding symbolic

feature values, as recited in independent claims 1, 10, and 19-23.

In response to the preceding arguments, Examiner respectfully submits that

Bieganski teaches the claim limitation "… distance between corresponding symbolic

feature values" as to form a neighborhood, the recommendation engine selects the set

of users from the user population who have the profiles *most similar* to the customer's

profile. The user item preferences of the customer are compared with the preferences

of users stored on the database (col. 7, lines 8-19 and 46-48). For each item in the

community popularity input 210, the serendipity control function applicator 204

computes a serendipity control value by applying a serendipity control function that was

input in 212 to each occurring the community popularity data set 210. The serendipity

control function 212 specifies how community popularity input values 210 are mapped

to serendipity control values output from the applicator 204. A community popularity

value exists for each item that occurs in the user preference data (col. 9, lines 22-33).

Examiner interprets the term "distance" to be the closeness or similarities of the values

between the two features. Bieganski's serendipity control value is a means to measure

or rank the similarities (i.e., distance) between the items in the user preference data

(col. 9, lines 28-32). Therefore, it is submited that Bieganski's serendipity control value is equivalent to Appellants' distance.

Appellants' disclosure 1:

Appellants' invention relates to methods of recommending items (i.e., recommender system) of interests such as a television program to users. A user selects stereotypes of interest to initialize his or her *profile* with the items that are closest to his or her own *interests* (page 3, lines 18-20 and 30-32).

Appellants' disclosure 2:

The television programming recommender 100 processes the *third party viewing history* 130 to generate stereotype profiles that reflect the typical patterns of television programs watched by representative viewers. A stereotype profile is a cluster of television programs (data points) that are similar to one another in some way. Thus, a given cluster corresponds to a particular segment of television programs from the third party view history (page 7, lines 1-10).

Appellants' disclosure 3:

A given data point, such as a television program, is assigned to a cluster based on the **distance** (i.e., how close or similar) between the data point to each *cluster* using the mean of each cluster (page 4, lines 6-8).

In the program recommendation environment of the illustrative embodiment, the

classes of interest are "watched" and "Non-watched". Generally, the disclosed

distance computation routine identifies values as being _similar if they occur with the_

same relative frequency for all classifications. Thus, two values are similar if they give

similar likelihoods for all possible classifications (page 4, lines 21-27).

Similar to **Appellant's disclosure 1**, Bieganski teaches receiving applicable data

includes user item _preference_ data and community item _popularity_ data (col. 3, lines 49-

52).

Bieganski further teaches the serendipity function applied to the community item

popularity value to produce the serendipity control value (col. 12, lines 11-16).

Bieganski further teaches producing a set of serendipity-weighted and filtered

recommendations by first, a set of item recommendations is received from a

recommendation engine 202 at step 1300. The first item in the set of item

recommendations is selected, at step 1302, and a request is made for a serendipity

control value for the first item, at step 1304 (col. 14, lines 33-38).

Similar to **Appellants' disclosure 2**, Bieganski further teaches if the customer is

looking for a specific book, then the customer may search by ISBN, title, author, or

subject, and when the customer locates the book of interest, the customer may be

presented with the serendipity-weighted and filtered recommendation value for the book

as a prediction for how much she will like the book. The serendipity-weighted

recommender system 808 provides serendipity-weighted and filtered recommendations

using the _past purchase history of the customer_ and of other costumer, found in the

purchase database 808 (col.16, lines 40-49).

Similar to **Appellants' disclosure 3**, Bieganski further teaches another

application of the invention is to predict serendipitious finds in items having audio/visual

content. Such items include _television programs_, movies, radio programs, or a digital

media program (col. 17, lines 20-23).

Bieganski further teaches creating a neighborhood (i.e., cluster) by comparing

the preferences of all the database users against the preferences of the customer...

then the n-maximum database users whose preferences are _most similar_ to the

preferences of the customer are selected for the neighborhood (Col. 7, lines 8-10, 40-

53, and 57-65).

Based on the above, Bieganski discloses an electronic processing system for

generating a serendipity-weighted recommendation output set according to a user

based (preferences). Thus, Bieganski's system and Appellants' invention are in the

same field of endeavor and the applied prior art teaches related subject matter (i.e.,

recommender system) in regard to Appellants' invention. Examiner submits that

Bieganski teaches the limitations as claimed.

__Arguments (2):__   Appellants continue to argue that assuming, arguendo, that

distance is equal to serendipity control value, it is respectfully submitted that column 14,

lines 32-56 of Bieganski teaches multiplying the recommendation value by the

serendipity control value. Aggregating or adding distances is nowhere taught or

suggested in Bieganski, let alone adding distances between each of the symbolic

feature values to determine the closeness of two items, as recited in independent claims

1, 10, and 19-23. Bieganski merely discloses an electronic processing system for

generating a serendipity-weighted recommendation output so that low value

recommendations are not made. Bieganski does not teach or suggest that the

serendipity control values are equivalent to distances between symbolic features, or

aggregating the distances between each of the symbolic feature values to determine the

closeness of two items, as recited in independent claims 1, 10, and 19-23. Rather,

Bieganski teaches (column 14, lines 32-56) multiplying the recommendation value by

the serendipity control value.

In response to the preceding arguments, Examiner respectfully submits that

Bieganski teaches the claim limitation "Aggregating or adding distances" as once the

serendipity control value has been received or calculated, the serendipity-weighted and

filtered recommendation with the serendipity control value, at step 1306, in this case by

__multiplying the recommendation value by the serendipity control value__, then it is *__added__*

__to the set of serendipity weighted__ and filtered recommendations, at step 1308 (col. 14,

lines 43-49). Furthermore, it is common knowledge that multiplication is a quicker form

of addition: multiplication is still addition. Therefore multiplying has equivalent meaning

as aggregating or adding.

Bieganski's system as illustrated in FIG. 2, the serendipity integration unit 206

takes the serendipity control value of an item produced by the control function

applicator 204, and the recommendation value of that item produced by

recommendation engine 202, and performs a computation to produce a final

serendipity weighted recommendation (col. 12, line 66 – col. 13, line 4).

Appellants' disclosure 4:

Applicants' invention determines the similarity or closeness between two items by

aggregating or adding the distances between each of the symbolic feature values

(page 19, lines 20-22).

In Repsonse to Argument, Arguments (1), Examiner has pointed out how

Bieganski's *serendipity control value* is equivalent to Appellants' distance.

Similar to **Appellants' disclosure 4,** Bieganski then *multiplying the*

recommendation value by the serendipity control value and added (i.e., aggregated) to

the set of serendipity weighted and filtered recommendations. As such, Bieganski's

teaching of **adding** the result of the production of the recommendation value and the

serendipity control value to produce a final serendipity weighted recommendation

teaches the limitation "aggregating the distances…" as claimed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

Conclusion

Claims 1-23 are properly rejected under 35 USC § 102(e).

In light of the foregoing arguments, the Examiner respectfully requests the

Honorable Board of Appeals to sustain the rejections.

Respectfully submitted,

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